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10/635,053	08/06/2003	Frank Martinez	6542/53775	1344

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Law Office of Mark J. Spolyar
38 Fountain Street
San Francisco, CA 94114

EXAMINER
PHAM, HUNG Q

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/635,053	MARTINEZ ET AL.
	Examiner	Art Unit	
	HUNG Q. PHAM	2168	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>12 May 2008</u>.

2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>33-40</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>33-40</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Claim Rejections - 35 USC § 112

The rejection under 35 U.S.C. § 112, second paragraph, has been withdrawn in view of the amendment.

Claim Rejections - 35 USC § 102

1. Applicant's arguments with respect to the rejection of under 35 U.S.C. § 102 have been fully considered but they are not persuasive.

- As argued by applicant:

   Zoltan does not teach a content map and an index map including the respective entries defined above. According to the Examiner, Zoltan's data table is equivalent to the content map, while Zoltan's change table is equivalent to the index map. See Office Action at 6-7. However, as the Examiner admits, Zoltan's change table merely includes entries that are used to replace, modify or delete corresponding entries of the data table, as indicated by the same row identifiers. Office Action at 7, lines 7-9. In the claimed subject matter, the content map entries include a unique identifier associated with one or more record chunks, while the index map entries include a unique identifiers associated with attributes of the record chunks.

The examiner respectfully disagrees.

The CHANGE TABLE 418 as in FIG. 7 is considered as being equivalent to the claimed *content map*. THE CHANGE TABLE comprises *one or more content map entries*, e.g., TABLE ENTRY 702 (Col. 18 Lines 31-33), *each content map entry comprising a unique identifier*, e.g., ROW ID, *one or more record chunks associated with the unique identifier*, e.g., the entire new ROW1 that includes name, address, phone number, descriptions and product number is copied to TABLE ENTRY 702 (Col. 18 Lines 42-45 and Col. 17 Lines 2-7), *each of the record chunks comprising a binary data object*, e.g., the values of name, address, phone number, descriptions and product number are in binary.

As shown in FIG. 6, the STATE INFORMATION table is considered as being equivalent to the claimed *index map*. The STATE INFORMATION table comprises *one or more index map entries*, e.g., entry 602 (Col. 17 Lines 44-46), each entry comprising *a unique identifier corresponding to one or more record chunks maintained in the content map*, e.g., ROW ID corresponding to new ROW1 that includes name, address, phone number, descriptions and product number maintained in the CHANGE TABLE 418, and *one or more record attribute values of the record chunks*, e.g., STATE INFORMATION.

- As argued by applicant:

  Furthermore, some of the Examiner's reasoning is illogical and inconsistent. For example, the Examiner alleges that Zoltan teaches receiving both record attributes and record chunks from a client node. To support this, the Examiner alleges that changes received from a client are stored in the change table. See Office Action at 7, lines 16-21. As Zoltan teaches, however, a replication agent processes change table entries to modify the data table. Accordingly, Zoltan does not teach receiving both record chunks and record attributes from a client node. Rather, data representing additions, changes or deletions to the data table are received from a client and stored in the change table, and the replication agent processes the change table entries to modify the data table. Zoltan does not teach a system where a client messages result in attributes being sent to an index map, and record chunks associated with the attributes to a content map.

The examiner respectfully disagrees.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *Zoltan does not teach a system where a client messages result in attributes being sent to an index map, and record chunks associated with the attributes to a content map*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Data store 404 stores information in table format that includes a plurality of columns,

e.g., name, address, phone number, descriptions and product number (Col. 17 Lines 2-7). A

change made to the data store 404 is stored in change table 418. When an entry in data store

404 is changed, the entire row is copied in CHANGE TABLE 418 (Col. 18 Lines 37-45). The

Zoltan technique as discussed indicates *record chunks of a data stream corresponding to the unique*

identifier, e.g., column data such as name, address, phone number, descriptions and product

number of new row corresponding to row ID is received from the data store 404 as *the first client*

node.

     2.   Applicant's arguments with respect to the mapping of the limitations as recited in

claim 33 with the Zoltan teaching have been fully considered but they are not persuasive. The

examiner has remapped the features in view of the amendment as detailed in the rejection

under 35 U.S.C. § 102.

Duplicate Claims, Warning

Applicant is advised that should claim 34 be found allowable, claim 36 will be objected to

under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application

are duplicates or else are so close in content that they both cover the same thing, despite a

slight difference in wording, it is proper after allowing one claim to object to the other as being a

substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

**Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for
failing to particularly point out and distinctly claim the subject matter which applicant
regards as the invention.**

Regarding claim 33, the clause *the unique identifier* (Line 13) references to at least three
unique identifiers (Lines 5, 8 and 12) in the claim. It is unclear which *unique identifier* is being
referenced.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the
basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

**Claim 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Zoltan et al.P
6,398,031 B1].**

Regarding claim 33, Zoltan teaches *a data repository node* (FIG. 1), comprising

an interface operative to communicate with client nodes and at least one other distributed data repository node over a computer network (FIG. 1 illustrates *an interface*, e.g., DNS, *operative to communicate with client nodes*, e.g., CLIENTS 102a and b, *and at least one other distributed data repository node*, e.g., NODE 101b, *over a computer network*, e.g., NETWORK 114), and

a mapping module (Instructions executed by processor 406 (Col. 13 Lines 31-33)) comprising

a content map comprising one or more content map entries, each content map entry comprising a unique identifier and one or more record chunks associated with the unique identifier, each of the record chunks comprising a binary data object (The CHANGE TABLE 418 as in FIG. 7 is considered as being equivalent to the claimed *content map*. The CHANGE TABLE comprises *one or more content map entries*, e.g., TABLE ENTRY 702 (Col. 18 Lines 31-33), *each content map entry comprising a unique identifier*, e.g., ROW ID, *one or more record chunks associated with the unique identifier*, e.g., the entire new ROW1 that includes name, address, phone number, descriptions and product number is copied to TABLE ENTRY 702 (Col. 18 Lines 42-45 and Col. 17 Lines 2-7), *each of the record chunks comprising a binary data object*, e.g., the values of name, address, phone number, descriptions and product number are in binary),

and at least one index map comprising one or more index map entries, each index map entry comprising a unique identifier corresponding to one or more record chunks maintained in the content map and one or more record attribute values of the record chunks (As shown in FIG. 6, the STATE INFORMATION table is considered as being equivalent to the claimed *index map*. The STATE INFORMATION table comprises *one or more index map entries*, e.g., entry 602 (Col. 17 Lines 44-46), each entry comprising *a unique identifier corresponding to one or more record chunks maintained in the content map*, e.g., ROW ID corresponding to new ROW1 that includes name, address, phone number, descriptions and product number maintained in the CHANGE TABLE 418, and *one or more record attribute values of the record chunks*, e.g., STATE INFORMATION);

wherein the mapping module is operative to

receive a request to insert a record from a first client node (*a request* is *received to insert a record* (Col.

13 Lines 40-41) *from a first client node*, e.g., NODE 112 of FIG. 4);

generate a unique identifier in response to the record insertion request (FIG. 4 and Col. 15 Lines

10-12, row ID as *a unique identifier* is generated in response to insertion request);

transmit the unique identifier to the client node (The row ID is transmitted to data store 404.

The data store 404 is considered as being equivalent to *the client node*);

receive an insertion message including the unique identifier and at least one record attribute value (As

shown in FIG. 6 (Col. 17 Lines 44-61), a session message is received including row ID and

STATE INFORMATION as *at least one record attribute value*);

store the at least one record attribute value associated with the insertion message in a corresponding

index map in association with the unique identifier (As shown in FIG. 6 (Col. 17 Lines 44-61), the row

ID and STATE INFORMATION is stored in STATE INFORMATION TABLE 422 as *a*

corresponding index map);

receive record chunks of a data stream corresponding to the unique identifier from the client node

(Data store 404 stores information in table format that includes a plurality of columns, e.g.,

name, address, phone number, descriptions and product number (Col. 17 Lines 2-7). A change

made to the data store 404 is stored in change table 418. When an entry in data store 404 is

changed, the entire row is copied in CHANGE TABLE 418 (Col. 18 Lines 37-45). The Zoltan

technique as discussed indicates *record chunks of a data stream corresponding to the unique identifier*,

e.g., column data such as name, address, phone number, descriptions and product number of

new row corresponding to row ID is received from the data store 404);

store the record chunks in the content map in association with the unique identifier (The CHANGE

TABLE 418 of FIG. 7 as *the content map* stores the entire row that was added such as name,

address, phone number, descriptions and product number in associated with row ID);

receive a query from a second client node, wherein the record satisfies the query (Row ID is used to track change to the database (Col. 8 Lines 1-4). If a row was added to one database, the database replication agent in the other database may not find a matching row ID in the other database (Col. 17 Lines 24-27). The Zoltan teaching as discussed indicates the step of *receiving a query from a second client node, wherein the record satisfies the query*, e.g., a track change from the other database using row ID for the new record that satisfies the track change);

provide, to the second client node, the record chunks associated with the unique identifier corresponding to the record (Via track change, the new row that includes name, address as *record chunks* associated with row ID as *the unique identifier corresponding to the record* is provided to the other database as *the second client node* (Col. 17 Lines 27-29)); and

stream additional record chunks of the data stream to the second client node as they are received from the first client node (The database replication agent communicates the changes from the change tables at a regular interval such as every one or five seconds (Col. 14 Lines 1-7). Further record chunks such as phone number, descriptions and product number of the new row as received from NODE 112 and stored in data store 404 is streamed to the other database at one second interval).

Regarding claim 34, Zoltan teaches all of the claimed subject matter as discussed above with respect to claim 33, Zoltan further discloses *the mapping module is further operative to synchronize the record attribute values in the at least one index map with record attribute values of at least one index map maintained by the at least one other distributed data repository node* (Col. 17 Line 62-Col. 18 Line 12).

Regarding claim 35, Zoltan teaches all of the claimed subject matter as discussed above with respect to claim 34, Zoltan further discloses *the module is further operative to transmit the record chunks to at least one other data repository node for replication* (Col. 17 Lines 11-43).

Regarding claim 36, Zoltan teaches a distributed data repository system, comprising

at least two distributed repository nodes (NODES 101a and b), each distributed repository

node comprising

a content map containing at least one message payload stored in association with a message payload

identifier (The CHANGE TABLE 418 as in FIG. 7 is considered as being equivalent to the

claimed *content map*. The CHANGE TABLE comprises *at least one message payload*, e.g., TABLE

ENTRY 702 (Col. 18 Lines 31-33), and *at least one message payload identifier*, e.g., TIME STAMP),

and

at least one index map containing at least one content attribute value and a corresponding message

payload identifier (As shown in FIG. 6, the STATE INFORMATION table is considered as being

equivalent to the claimed *index map*. The STATE INFORMATION table comprises *one or more index*

map entries, e.g., entry 602 (Col. 17 Lines 44-46), each entry comprising *a corresponding message*

payload identifier, e.g., SESSION ID, and *at least one content attribute value*, e.g., STATE

INFORMATION);

wherein each distributed repository node is operative to

receive a request to insert a record from a first client node (*a request* is *received to insert a record* (Col.

13 Lines 40-41) *from a first client node*, e.g., NODE 112 of FIG. 4);

generate a unique identifier in response to the record insertion request (FIG. 4 and Col. 15 Lines

10-12, row ID as *a unique identifier* is generated in response to insertion request);

transmit the unique identifier to the client node (The row ID is transmitted to data store 404.

The data store 404 is considered as being equivalent to *the client node*);

receive an insertion message including the unique identifier and at least one record attribute value (As

shown in FIG. 6 (Col. 17 Lines 44-61), a session message is received including row ID and

STATE INFORMATION as *at least one record attribute value*);

store the at least one record attribute value associated with the insertion message in a corresponding index map in association with the unique identifier (As shown in FIG. 6 (Col. 17 Lines 44-61), the row ID and STATE INFORMATION is stored in STATE INFORMATION TABLE 422 as *a corresponding index map*);

receive record chunks of a data stream corresponding to the unique identifier from the client node (Data store 404 stores information in table format that includes a plurality of columns, e.g., name, address, phone number, descriptions and product number (Col. 17 Lines 2-7). A change made to the data store 404 is stored in change table 418. When an entry in data store 404 is changed, the entire row is copied in CHANGE TABLE 418 (Col. 18 Lines 37-45). The Zoltan technique as discussed indicates *record chunks of a data stream corresponding to the unique identifier*, e.g., column data such as name, address, phone number, descriptions and product number of new row corresponding to row ID is received from the data store 404);

store the record chunks in the content map in association with the unique identifier (The CHANGE TABLE 418 of FIG. 7 as *the content map* stores the entire row that was added such as name, address, phone number, descriptions and product number in associated with row ID);

receive a query from a second client node, wherein the record satisfies the query (Row ID is used to track change to the database (Col. 8 Lines 1-4). If a row was added to one database, the database replication agent in the other database may not find a matching row ID in the other database (Col. 17 Lines 24-27). The Zoltan teaching as discussed indicates the step of *receiving a query from a second client node, wherein the record satisfies the query*, e.g., a track change from the other database using row ID for the new record that satisfies the track change);

provide, to the second client node, the record chunks associated with the unique identifier corresponding to the record (Via track change, the new row that includes name, address as *record chunks* associated with row ID as *the unique identifier corresponding to the record* is provided to the other database as *the second client node* (Col. 17 Lines 27-29)); and

stream additional record chunks of the data stream to the second client node as they are received from

the first client node (The database replication agent communicates the changes from the change

tables at a regular interval such as every one or five seconds (Col. 14 Lines 1-7). Further record

chunks such as phone number, descriptions and product number of the new row as received

from NODE 112 and stored in data store 404 is streamed to the other database at one second

interval);

synchronize the record attribute values in the at least one index map with record attribute values of at

least one index map maintained by the at least one other distributed data repository node (Col. 17 Line 62-

Col. 18 Line 12).

Regarding claim 37, Zoltan teaches all of the claimed subject matter as discussed above

with respect to claim 36, Zoltan further discloses *each distributed data repository node is further*

operative to transmit the record chunks to at least one other data repository node for replication (Col. 17 Lines

11-43).

Regarding claim 38, Zoltan teaches all of the claimed subject matter as discussed above

with respect to claim 36, Zoltan further discloses *each distributed data repository node is further*

operative to request and receive from at least one other distributed data repository node record chunks that match

a query received from a client node (Col. 17 Lines 11-33).

Regarding claim 39, Zoltan teaches all of the claimed subject matter as discussed above

with respect to claim 33, Zoltan further discloses *each distributed data repository node is further*

operative to transmit notifications to other distributed data repository node to reserving the unique identifier

(Col. 17 Lines 11-33).

Regarding claim 40, Zoltan teaches all of the claimed subject matter as discussed above with respect to claim 36, Zoltan further discloses *each distributed data repository node is further operative to transmit notifications to other distributed data repository node to reserving the unique identifier* (Col. 17 Lines 11-33).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. PHAM whose telephone number is 571-272-4040. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIM T. VO can be reached on 571-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUNG Q PHAM/
Primary Examiner
Art Unit 2168

July 11, 2008